

IAPMO/ANSI Z1033-2013

Flexible PVC Hoses and Tubing for Pools, Hot Tubs, Spas, and Jetted Bathtubs



American National Standard

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Preface

This is the first edition of IAPMO/ANSI Z1033, *Flexible PVC Tubing for Pools, Hot Tubs, Spas, and Jetted Bathtubs*. This Standard supersedes IAPMO PS 33-2011, *Flexible PVC Hose for Pools, Hot Tubs, Spas and Jetted Bathtub*.

This Standard was developed by the IAPMO Z1033 Technical Subcommittee and approved by the IAPMO Plumbing Standards Committee in accordance with the *ANSI Essential Requirements: Due process requirements for American National Standards and IAPMO Policies and Procedures for Consensus Development of American National Standards*. This Standard was approved as an American National Standard on May 10, 2013.

Notes:

- (1) *The use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- (2) *This standard was developed in accordance with the IAPMO procedures accredited as meeting the criteria for American National Standards and it is an American National Standard. The IAPMO Standards Committee that approved this Standard was balanced to assure that individuals from competent and concerned interests had an opportunity to participate. During its development, this Standard was made available for public review, thus providing an opportunity for additional input from industry, academia, regulatory agencies, and the public at large.*
- (3) *This Standard was developed by consensus, which is defined as substantial agreement; consensus implies much more than a simple majority, but not necessarily unanimity. It is consistent with this definition that a member of the IAPMO Plumbing Standards Committee can be included in the Committee list and yet not be in full agreement with all sections of this Standard.*
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 - (d) *rationale for the change.*
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 - (a) *the edition of the standard for which the interpretation is being requested;*
 - (b) *the definition of the problem, making reference to the specific section and, when appropriate, an illustrative sketch explaining the question;*
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Flexible PVC Hoses and Tubing for Pools, Hot Tubs, Spas, and Jetted Bathtubs

1 Scope

1.1

This Standard covers flexible PVC hoses and tubing for use on pools, hot tubs, spas, and jetted bathtubs and specifies requirements for materials, physical characteristics, performance tests, and markings.

1.2

Flexible PVC hoses and tubing covered by this Standard are intended to be used on hot tub, spa, and jetted bathtub

- (a) water circulation systems;
- (b) pneumatic systems; and
- (c) solar heating applications in which the tubing is intended to be protected from the elements when installed.

1.3

The requirements of this Standard are not intended to prevent the use of alternative materials or methods of construction provided such alternatives meet the intent and requirements of this Standard.

1.4

In this Standard,

- (a) "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy to comply with the standard;
- (b) "should" is used to express a recommendation, but not a requirement;
- (c) "may" is used to express an option or something permissible within the scope of the standard; and
- (d) "can" is used to express a possibility or a capability.

Notes accompanying sections in the body of the Standard do not specify requirements or alternative requirements; the purpose of notes is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and can be written as requirements.

1.5

SI units are the primary units of record in global commerce. In this Standard, the inch/pound units are shown in parentheses. The values stated in each measurement system are equivalent in application, but each unit system is to be used independently. Combining values from the two measurement systems can result in non-conformance with this Standard.